

Nursing Interventions Classification and Nurses' Workloads

Subjects: **Nursing**

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The Nursing Interventions Classification allows the systematic organisation of care treatments performed by nurses, and an estimation of the time taken to carry out the intervention is included in its characteristics. The evidence found through the use of Nursing Interventions Classification (NIC) terminology to determine nurses' workloads is not conclusive. The NIC time averages are an adequate tool for understanding the impact of nurses' workload on people's health care. Yet the number of studies needs to be increased to provide more scientific evidence, along with improvements in methodological quality and rigour. Nurses must implement the quantity and quality of the recording in standardised NIC terminology throughout health records and in all clinical settings to advance the study of its relationship to the measurement of nurses' workload. This could substantially contribute to improvements in staffing and quality of patient care.

standardized nursing terminology

workload

Interventions

1. Introduction

The Nursing Interventions Classification (NIC) allows the systematic organisation of care treatments carried out by nurses ^[1]. Since it first appeared in 1987, it has grown and been continuously developed as a result of the additions and research contributed by nurses. Among its features is an estimation of the time needed to perform the intervention and the minimum level of training the professional must have to carry it out safely and competently. The time needed to perform a NIC has been defined as the average time required to carry it out; this is an average rate that can be used to determine the remuneration rates derived from the nursing activity, long enough to carry out the intervention, although not so long that the economic costs are unreasonably high due to its remunerative effects ^[2]. Interventions were grouped into five categories: 15 min or less, 16–30 min, 32–45 min, 46–60 min and more than an hour. These estimates are based on the judgment of professionals who are familiar with the intervention and with the clinical specialty, and these may differ according to profession and settings. However, this offers a starting point from which to calculate the time and degree of training required, along with the cost of nursing care ^[2].

Cruz et al. ^[2] describe the concept of “workload” as the volume of nursing services provided by a care unit. This figure is obtained by measuring the care time dedicated to the nurses' actions and multiplying them by the number of patients treated. The workloads described in the NIC do not correspond to simple activities, independent of the complexity of critical thought immersed in the nursing process. Individual and unit experience should be taken into

account, along with other contextual factors that determine the outcomes of these workloads. Cordova et al. [3] observed a substantial reduction in the times reported by nurses to complete each of the interventions compared to those published in the NIC. This does not mean that the times are not valid; on the contrary, it reflects the highly specialised nature of the care administered in specific units. It is possible that the nurses in the units observed needed less time to complete most of the interventions as they were providing similar care to most patients. According to Cruz et al. [2], the activities carried out by the nurses could be “direct care” for the patient through immediate interaction involving physiological and psychosocial activities and including practical interventions and counselling support. On the other hand, “indirect care” activities involve actions related to management of the unit or interdisciplinary cooperation for the patient’s benefit [1]. From this perspective, the studies analysed indicate that the nurses dedicate 22–38% of their time to direct care, while indirect care represents some 26–50% [2]. Regarding anticipation of interventions, these can be classified as “scheduled” during the work shift, and “unscheduled”, which correspond to those that are unforeseen or cannot be predicted during the working day [3]. Separately, there are “non-specific” activities in the nursing profession that do not correspond to NIC taxonomy concepts and can be classified as “associated activities”. Similarly, activities carried out by the nurses during their working day related to meeting their own physiological needs or others of a personal nature are classified as “personal activities”.

The use of standardised nursing terminology, such as that in the NIC, allows nurses’ work to be represented in a uniform manner in IT systems, which is the first step in developing a measurement of workload and, at the same time, facilitates research into the effectiveness of care [3]. However, to determine actual workloads, it is essential to develop specific models that contain information on professional staffing. The NIC terminology only provides the bases that can be used to obtain a valid measure of nurses’ workloads. At this moment, measurement of nurses’ workloads available in the scientific literature using the NIC has only been reported in specific hospital situations [4] [5], such as paediatrics [6][7][8] and oncology [9][10] clinical settings.

2. Current Works

Currently, the high degree of computerisation of the Electronic Medical Clinical history in health services requires the application of mechanisms that facilitate the mapping and standardisation of records in IT systems. It is essential that the computerised system reaches its potential to fully capture the records [3] and that this information can be available and used to assess nursing activity.

Concerning to the average times required by nurses to perform the interventions, the studies by Cordova et al. [3] and Somensi et al. [4] reported the values and confidence intervals for their performance. In this sense, it can be noted that many of the time averages are in line with the NIC. Besides, some activities show lower averages than the NIC, probably because the nurses had experience in these specific clinical settings [3].

The scarcity of evidence found highlights the need to carry out research with greater methodological quality, such as prospective and retrospective observational or intervention studies with experimental methodology, and to broaden the samples to include new regions, contexts and settings in which NIC terminology can be applied. Similarly, extensive databases are required that contain information on these prevalences to establish new means

of comparing the application of the interventions. It is essential to identify and map the activities carried out by nurses for the creation of lists [\[6\]\[9\]](#) that provide the basis for procedural guidelines but also to understand the nature and typology of the interventions and their influence on the time required to perform them. The aim is to develop instruments that can be used to study nurses' workloads [\[6\]\[8\]\[9\]](#). Among the aspects that could affect these workloads is the highly specialised nature of care provided in units with clinical specificity, which appears to facilitate reductions in the time needed to successfully complete most of the interventions. However, the results reported indicate that the NIC averages could be lower than the times required by nurses to perform the interventions in up to 15% of cases. The idiosyncrasies of nursing care make it inevitable that the daily activity is disrupted by unscheduled interventions [\[3\]](#), as well as obstacles and constant interruptions to the nurses' work, which affects up to 163.9% of the amount of time required to complete the interventions [\[11\]](#). As such, the care routine imposed by work dynamics in the distinct care models can increase the activities assigned to nurses [\[12\]](#), which can affect the quality of care and health outcomes in the population.

The results are insufficient to consider that the averages indicated in the NIC should be adjusted to the clinical reality. Although these are generalised time averages, they only provide a basis to capture a valid measurement of nurses' workloads.

The only experience that has been analysed to examine the intensity of its influence on nurses' workloads corresponds to transfers of patients between facilities [\[5\]](#). Although the results were lower than the averages established in the NIC, the researchers considered that, during the transfer of the patients, the nurses did not record other activities involved in continuity of care or the documentation required for the administrative process of the patients' transfers, which would increase workloads by up to 29%.

On a further point, De Groot et al. [\[13\]](#) showed that nurses who work in the community setting are as likely to experience increases in their workloads when they carry out clinical documentation activities and when they perform organisational documentation activities. However, no statistically significant correlation was observed between the time invested in clinical documentation and the perception of the increase in workloads; while a statistically significant moderate relationship was seen between the time dedicated to organisational documentation and the perception of increased workloads.

It should be pointed out that interest in studying these workloads with the use of the NIC was found in only a few nursing settings, such as oncology or paediatrics, and in a few clinical processes such as hospitalisation and surgical processes. Other limitations that affect the results and conclusions arise from inadequate mapping and coding of some of the interventions reported in studies, such as that carried out by Somensi et al. [\[4\]](#), which do not ensure that the averages indicated in these cases correspond closely to those in the NIC.

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